AMENDMENT TO THE CLAIMS

1. (Currently Amended) A method for testing the authenticity of a data carrier having an integrated circuit by an external device with which the data carrier exchanges data, comprising the steps of:

providing a first bidirectional transmission channel for transmitting signals between the data carrier and the external device,

providing a second bidirectional transmission channel logically separated from the first transmission channel, the separation of the first and second transmission channels being so designed that data transmission via one transmission channel does not interfere with data transmission via the other transmission channel and the second transmission channel is activable during the total time period between activation and deactivation of the data carrier,

having the data carrier generate a signal required for authenticity

testing,

transmitting the signal for authenticity testing from the data carrier to the external device or a signal required for generating the signal for authenticity testing from the external device to the data carrier at least partly via the second transmission channel, and

having the external device receive the signal for authenticity testing, and deciding on the basis of the received signal whether the data carrier is authentic.

2. (Previously Presented) A method according to claim 1, characterized in that the second transmission channel is provided by modulating the signal of the first transmission channel.

3. (Previously Presented) A method according to claim 2, characterized in that modulation does not impair an ISO compatibility of data exchange between the data carrier and the external device existing for the first transmission channel.

4. (Previously Presented) A method according to claim 2, characterized in that modulation is performed in areas of the signal pattern which are not evaluated according to the ISO standard.

5. (Previously Presented) A method according to claim 2, characterized in that the changes caused by modulation in the signal of the first transmission channel are within the range of variation of the signal level permitted by the ISO standard.

6. (Previously Presented) A method according to claim 2, characterized in that modulation and demodulation of the signal are performed in the data carrier and in the external device with the aid of a mixing/demixing device in each case.

7. (Previously Presented) A method according to claim 1, characterized in that the first transmission channel is a line for transmitting standard data or a line for transmitting a clock signal or a line for the supply voltage.

8. (Currently Amended) A method for testing the authenticity of a data carrier having an integrated circuit by an external device with which the data carrier exchanges data, comprising the steps of:

providing a first bidirectional transmission channel for transmitting signals between the data carrier and the external device,

providing a second bidirectional transmission channel physically separated from the first transmission channel and comprising at least one line or contactless transmission path not provided according to the ISO standard, the second transmission channel being activable during the total time period between activation and deactivation of the data carrier,

having the data carrier generate a signal required for authenticity testing,

transmitting the signal for authenticity testing from the data carrier to the external device or a signal required for generating said signal from the external device to the data carrier at least partly via the second transmission channel, and

having the external device receive the signal for authenticity testing, and deciding on the basis of the received signal whether the data carrier is authentic.

9. (Previously Presented) A method according to claim 8, characterized in that the contactless transmission path is realized by transmitting the data as electromagnetic, electrostatic, magnetic, acoustic or optical signals.

10. (Previously Presented) A method according to claim 9, characterized in that a mixture of wavelengths is used for transmission via the contactless transmission path.

11. (Previously Presented) A method according to claim 1, characterized in that the decision on authenticity of the data carrier is contingent on whether data exchange is possible between the devices to which the first and second transmission channels are coupled in the data carrier.

12. (Currently Amended) A data carrier which can exchange data with an external device and as an integrated circuit, wherein

the data carrier has a first device for generating signals for data exchange between the data carrier and the external device, and the first device is adapted to be coupled to a first bidirectional transmission channel,

the data carrier has a second device for generating signals required for authenticity testing of the data carrier, and the second device is adapted to be coupled to a second bidirectional transmission channel and connected with the first device,

the first and second transmission channels are separated logically or physically, and

data exchange with the second device [[(4)]] does not interfere with data exchange with the first device, and the second device [[(4)]] is ready for generating signals for authenticity testing of the data carrier during the total time period between activation and deactivation of the data carrier.

13. (Previously Presented) A data carrier according to claim 12, characterized in that the first device and the second device are each coupled to the transmission channels via a mixing/demixing module.

14. (Currently Amended) A system for testing the authenticity of a data carrier and/or an external device comprising:

a data carrier with a first device for generating signals for data exchange with the external device and a second device for generating and/or processing signals for authenticity testing,

an external device with a first device for generating signals for data exchange with the data carrier and a second device for generating and/or processing signals for authenticity testing,

a first transmission bidirectional channel for transmitting signals between the first device of the data carrier and the first device of the external device,

and a second bidirectional transmission channel for transmitting signals between the second device of the data carrier and the second device of the external device, the first and second transmission channels being separated logically or physically and the separation of the first and second transmission channels being so designed that data transmission via one transmission channel does not interfere with data transmission via the other transmission channel, and the second transmission channel being activable during the total time period between activation and deactivation of the data carrier.